

IN THE SPECIFICATION

Please amend paragraphs 19-24 as follows:

Referring now to Figure 5, there is depicted a high-level logic flow diagram of a method for translating data packets from one protocol to another by using apparatus 20 from Figure 2, in accordance with a preferred embodiment of the present invention. Starting at block ~~30~~ 50, a group of translation templates are constructed and the translation templates are loaded into a translation template cache, as shown in block ~~31~~ 51. The translation templates, such as translation template 40 from Figure 4, are preferably constructed during initial configuration of a system, and the translation templates are then loaded into the translation template cache. Otherwise, the translation templates can be constructed "on-the-fly" as they are being loaded into the translation template cache.

Next, exchange attributes are identified by a translation router, such as translation router 15 from Figure 1, as depicted in block ~~32~~ 52. At this time, network protocols are also identified, usually as part of the translation engine configuration, and the translation templates are verified as available for use. As mentioned previously, a multi-protocol translation router is capable of identifying the type of network protocol to which a network packet belongs based on the incoming port number the network packet comes from, and is also capable of identifying the type of network protocol to which a network packet should be translated based on the outgoing port number the network packet is to be transmitted.

As each data packet arriving into the translation router, an appropriate translation template is selected from the translation template cache according to the translation context of the data packet by an translation engine, as shown in block ~~33~~ 53.

Appropriate header fields from the data packets from a first network are read and used by the translation engine along with the appropriate translation template in the translation template cache to generate new headers for transmission into a second network, as depicted in block ~~34~~ 54.

The data payload of the data packet from the first network is removed from the header of the data packet, and is then appended to the recently constructed header for the second network, as shown in block ~~35~~ 55. The resultant data packet intended for the second network is then placed into a local memory of the network router.

The data packet intended for the second network is subsequently pulled out of the local memory within the network router. This is usually performed by using a direct memory access (DMA) or by the general-purpose processor, as depicted in block ~~36~~ 56. The data packet intended for the second network is sent to the second network.

Please amend paragraph 25 as follows:

As has been described, the present invention provides an improved method and apparatus for translating data packets between different network protocols. Control blocks are constructed in a system memory to facilitate translation from one protocol domain to another. They must be repeatedly accessed as part of the translation process. With the present invention, the control blocks are stored on-chip in a manner that facilitates repeated use over a number of data packets. Further, the on-chip storage is not bound to one protocol format or another. In this way, packets may be translated across such protocols as Fibre Channel, Ethernet and InfiniBand.